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International Society for the History and Bibliography of Herpetology

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The Society

The **ISHBH** is a not-for-profit organization established to bring together individuals for whom the history and bibliography of herpetology is appealing, to promote the knowledge of related topics among members and the general public, and to promote research. Membership is open to anyone who shares the aims of the Society.

Membership

The biennial fee for 2006–2007 is US $30, Institutions US $50 and Life Membership US $300. This fee includes a subscription to the Society's biannual journal *Bibliotheca Herpetologica* (formerly the *International Society for the History and Bibliography of Herpetology Newsletter and Bulletin*). A membership form can be found on our Web site. Payment can be made with a personal check or a money order drawn on a US bank. Please submit the payment to our postal address below. In the EU and elsewhere you may pay the USD corresponding amount in EUR or SEK. From EU countries: IBAN: SE83 9500 0099 6042 0455 1206, BIC: NDEASESS. From elsewhere: Account No. 455120-6 with Plusgirot, Stockholm, Sweden, Swift: NDEASESS. For any other method of payment please contact us first.

Members are encouraged to contribute with articles, essays, news of meetings, hints on antiquarian trade, book reviews and other issues associated with herpetology. The Society organizes seminars, visits to libraries, museums, research stations, etc. in connection with herpetological meetings with international participation. The Society works to facilitate informal contacts among members so that the members can meet, offer support in knowledge and transact exchanges of literature and ephemera.

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Instructions for Authors

Authors submitting a manuscript do so on the understanding that the work has not been published before and is not being considered for publication elsewhere. Manuscripts are peer reviewed. *Bibliotheca Herpetologica* (formerly the *International Society for the History and Bibliography of Herpetology Newsletter and Bulletin*) is submitted to BIOSIS (U.K.) for inclusion in *Zoological Record*.

The language of *Bibliotheca Herpetologica* is English. British English or American English spelling and terminology may be used, but either one should be used consistently throughout the article. Consult the latest issue of *Bibliotheca Herpetologica* for article format. The Editor reserves the right to adjust style to maintain uniformity.

Manuscripts should be submitted to the Editor (pdavid@mnhn.fr) in electronic form and preferably in Rich Text Format (*.rtf; this ensures cross-platform compatibility). However, you should contact the Editor first for advice. Color illustrations other than used for the cover will be at the author's expense. Illustrations should also be submitted in electronic form, but consult with the Managing Editor first. The ISHBH cannot take responsibility for material sent by post.

Society News

The Annual Business meeting for 2005 was held on July 9

The meeting was originally announced for Stellenbosch, South Africa in June but it was eventually moved and held in Tampa, Florida, USA in conjunction with joint meeting of the three large American herpetological societies (HL/SSAR/ASIH), as was announced on our website. Ten members attended the meeting and the traditional shared luncheon by members and guests. The Treasurer's Report for 2004 was approved at the meeting. It can be viewed on the website or can be requested from the Society.

A symposium to celebrate Linnaeus' birth 300 years ago in 2007

The contributions of Linnaeus to zoology included many to herpetology. In particular he described numerous taxa but he also treated other systematic issues, ecological matters, and snake envenomation and its treatment. Carl Linnaeus was born in 1707. There will be observations of the 300th anniversary of his birth at various places around the world in 2007. The Society decided at the 2005 meeting to commemorate Linnaeus with a special symposium related to Linnaeus' contributions to herpetology. An exhibition of original printed material associated with herpetology by Linnaeus and his disciples is also being considered. The 2007 joint HL/SSAR/ASIH meeting in Saint Louis, USA is the targeted site for the symposium and the exhibition.

Symposia at this meeting must be endorsed by one or more of the main participating societies and applications for the 2007 meeting must be submitted by the ISHBH before 1 March 2006. Individuals who want to contribute an oral presentation to the symposium can contact any of the Society officers before 1 March 2006 or as soon as possible.

Be an "About the cover" contributor

A reptile or amphibian picture with historical connotations has graced the cover of each issue since our journal was first published. Usually these have been reproduced from plates in older herpetological literature, sometimes to form part of submitted paper but usually as a stand-alone image with a shorter thematic essay, as is the case in this issue. Readers are encouraged to contribute with their own suggestions for the future covers of *Bibliotheca Herpetologica*. There is no limitation *per se* as to scope of the illustrations, rather it is left to the imagination of the contributor as to what might be appropriate to use as an attractive cover page. An editorial committee will review and decide on all proposals and the text will be reviewed if it contains technical data. Please contact the Editor with your contribution.

Membership renewal fee

A new two-year membership period will start from 2006. The dues for two years will remain the same, that is US $30 for ordinary individuals, US $50 for institutions and US $300 for life time individual membership. Please send your checks to the address of the society in Sweden or do an IBAN transfer to our account in Euro. Those who would like to pay during the HL/SSAR/ASIH joint meeting in New Orleans, Louisiana, USA in mid-July 2006 can do so. Bibliomania! (www.herpbooks.com) accepts credit card payments.

The ISSN-number of *Bibliotheca Herpetologica*

When the title of the journal was changed with last issue also the ISSN-number should have changed. The new number effective from volume 5(2) is ISSN 1653-3798.

About the Cover

Oates' vine snake, *Thelotornis capensis oatesii*, described by Albert Günther in 1881

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Source: *Matabele Land and The Victoria Falls. A Naturalist's Wanderings in the Interior of Southern Africa, from the letters & journals of the late Frank Oates, F.R.G.S.* Edited by C . G. Oates. *Appendix III. Herpetology.* (2), 329-330, plates C and D, by Albert Günther. Kegan Paul & Co, London 1881.

The beautiful African twig snakes of the genus *Thelotornis* are one of several unrelated groups of slender, arboreal snakes that share a similar body form and occupy comparable ecological niches on many continents. Albert Günther (1830-1914), the Keeper of the Zoological Department at the British Museum in London (now the Natural History Museum), described the species illustrated on the cover as *Dryiophis Oatesii*. He received the snake as part of a collection of preserved animals from southern Africa that had been collected by the late Frank Oates (1840-1875).

> Sidney Mendelssohn described Frank Oates' exploration and destiny in his bibliography: "...accompanied by his brother, Mr. W. E. Oates, sailed for South Africa in March 1873. The brothers fitted out their expedition at Maritzburg, and travelled through the Transvaal and Bechuanaland, visiting the Tati district, soon after which Mr W. E. Oates returned to England. Frank Oates proceeded to Bulawayo, and he gives an interesting account of Matabeleland at this period. He was well received by Lobengula [the king], who gave him considerable assistance, but owing to many delays he made several unsuccessful attempts to reach the falls and did not arrive there till the last day of the year 1874; soon after which he was attacked by fever and died on the return journey to Tati early in February 1875. His account of Matabeleland is one of the best of the earlier modern works on the country, and the volume possesses a number of coloured and chromo plates." (Mendelssohn's South African Bibliography, London 1910, vol. 2:112).

Matabeleland is a region in southwestern Zimbabwe, named for the Matabele people, who were driven out of the Transvaal region in the first part of the 19th century by the Boers. The people are today known as the Ndebele. The former capital of Matabeleland was situated near present day Bulawayo.

Günther described two new species in one of several appendices of the book. The appendix was also published separately with printed wrappers in 1882, probably for the author. This account and the illustration are taken from a copy of such an author's separate.

Both species were illustrated in colour, on two plates (C and D) measuring 143 by 218 mm. The other species depicted was *Coronella tritœnia*, a junior synonym of *Psammophylax tritaeniatus*, a species that Günther had described already in 1868.

Edward Hallowell had earlier, in 1844, described a snake from Liberia with similar features as *D. Oatesii – Leptophis Kirtlandii* (Description of new species of African Reptiles, Proc. Acad. Nat. Sci. Philadelphia, 1844: 62). *Leptophis* was a genus introduced by Thomas Bell in 1825 (On Leptophina, a group of serpents comprising the genus *Dryinus* of Merrem, and a newly formed genus proposed to be named *Leptophis*. Zool. J., London 2[7]: 322-329, pl. XII) based on a species described by Linnaeus in 1758 (Systema naturae, edition 10: 225), *Coluber ahaetulla*, which is a similar slender tree snake. Bocage in 1866 (Lista dos

reptis das possessoes portuguezas d'Africa occidental que existem no Museu Lisboa. J. Sci. Lisbon 1: 37-56) placed it in the genus *Dryiophis* Dalman, 1826, the name subsequently used by Günther. The genus *Leptophis* is now restricted to colubrid parrot snakes of the New World.

The present generic name, *Thelotornis*, was introduced by Andrew Smith in 1849 (Illustrations of the Zoology of South Africa, Reptilia, Appendix, p. 19) based on his description of *T. capensis*, a species that, as explained by Smith, inhabits "Kaffirland and the country towards Port Natal" in South Africa.

Günther's description is rather short and partly based on lepidosis. He remarked on the color differences with respect to *kirtlandii*, noting that the head has a very peculiar coloration; the upper surface is ornamented by a pink T-shaped figure, the horizontal bar stretching from eye to eye, and the vertical part occupying the middle of the occipital shields. The total length of the specimen was 47 inches (1,194 mm), of which the tail measured 19 inches (483 mm).

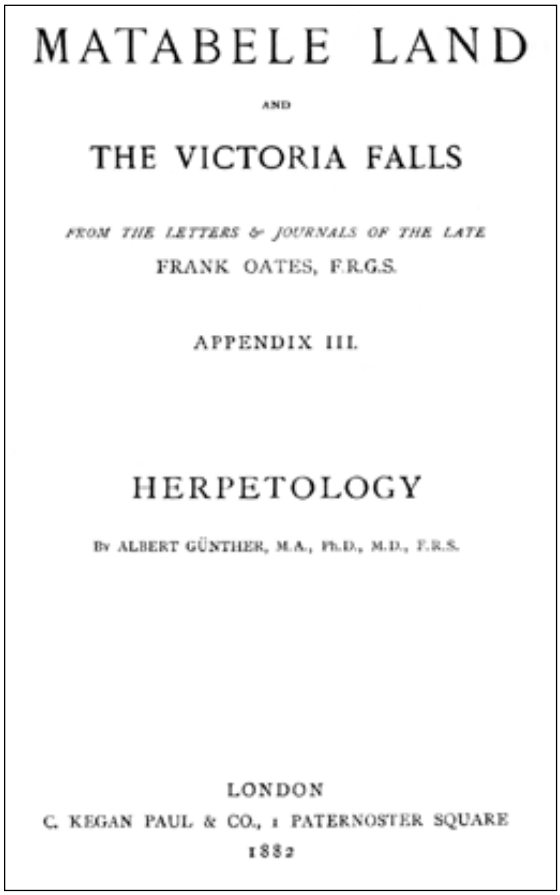
Wilhelm C. H. Peters in 1882 (Reise nach Mossambique, Zoologie, III, Amphibien, p. 131-132) placed T. capensis in the synonymy of *Dryiophis kirtlandii* but retained Smith's generic name *Thelotornis*.

Several authors dealing with African snake nomenclature have proposed alternative interpretations of the taxonomy of the *Thelotornis* group: J. V. Barboza du Bocage in 1895, George Albert Boulenger in 1896, Charles Mitchell Bogert in 1940, Arthur Loveridge in 1944 and 1953 (for references see Donald G. Broadley, 2001, A review of the genus *Thelotornis* A. Smith in eastern Africa, with the description of a new species from the Usambara mountains, Afr. J. Herp. 50 [2]: 53-70). It was Gaston-François de Witte who, in 1953 (Exploration du Parc National de l'Upemba, fasc. 6, Reptiles, p. 247-251), once more treated *T. kirtlandii* and *T. capensis* as separate species based on observations that the taxa were sympatric in the province of Katanga in Congo (Kinshasa).

Donald G. Broadley in the 2001-description of a new species and a review of the *Thelotornis* complex proposed this systematic arrangement:

Thelotornis kirtlandii (Hallowell)
Thelotornis usambaricus sp. nova
Thelotornis mossambicanus (Bocage)
Thelotornis capensis capensis A. Smith
Thelotornis capensis oatesii (Günther)

T. c. oatesii is the largest and most robust form, adult averaging about 800 mm with a maximum of 1,062 mm.


MATABELE LAND

AND

THE VICTORIA FALLS

FROM THE LETTERS & JOURNALS OF THE LATE

FRANK OATES, F.R.G.S.

APPENDIX III.

HERPETOLOGY

BY ALBERT GÜNTHER, M.A., Ph.D., M.D., F.R.S.

LONDON

C. KEGAN PAUL & CO., 1 PATERNOSTER SQUARE

1882

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The Contemporary Value of Historical Herpetological Illustrations

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In 1857 Louis Agassiz began publishing his seminal "Contributions to the Natural History of the United States of America," an ambitious 10-volume work chronicling the zoological natural history of America. Only five volumes were ever realized and published. Agassiz's first monograph in three parts, published in two volumes, opened with his anti-Darwinian "I. Essay on Classification," then continued into his study on North American turtles with "II. North American Testudinata" and "III. Embryology of the Turtle; with Thirty-four Plates."

These thirty-four plates (numbered I-XXVII with the sub-plates VII^{a}, IX^{a}–IX^{e}, and XVIII^{a}) found at the close of volume two are rendered exquisitely life-like. Plates I-VI depict "young turtles in their natural size at the time of hatching, or soon afterwards;" plates VII and VII^{a} "represent the mature eggs of many species, with fragments of the shell magnified;" plates VI and VIII-XXV depict in excruciating detail the embryology of the turtle; and plates XXVI and XXVII depict color engravings of the "variation of species" (Agassiz 1857). (Plate XXVII was reproduced on the cover of this journal in Vol. 1, No. 2: 1999.) Each plate boasts an exacting attention to scale, dimensions, and proportions exemplary of an art form seemingly lost in today's modern world.

Today, such zoological plates are often coveted for their beauteousness; individual plates liberated by book breakers can, altogether, often fetch values an order of magnitude greater than that of the book alone. Absent of plates, the text becomes monetarily valueless and is likely tossed. The marriage of text and illustration, however, is critical to the biologist. Text and illustration, conceived as two parts of the whole, complement each other.

Agassiz himself noted in introducing his work that he "endeavored to make it a text-book of reference for the student" (Agassiz 1857). Today, such "text-books" have passed their prime. Their text is dated, while the books themselves are squirreled away in private collections or library annexes. And so it is that the practical applications of herpetological – not to mention zoological – illustrations are easily overlooked or lost, especially when disentangled from their natal text. But the information contained therein – in this case size – can be imperative to scientists' work today.

In the case of California's western pond turtle (*Clemmys marmorata*), the only fresh-water turtle native to the North American Pacific Coast west of the Sierra-Cascade divide, these notations help confirm the disparity between past and present shell-sizes reported over the last 150 years. Moreover, they provide some insight into how western pond turtle populations extant in the wild today reflect the intense harvest they underwent historically in this same period.

The western pond turtle was once highly sought after in California as an ingredient for soups and stews in the mid to late 1800's and early 1900's. Between 1883 and 1931, sporadic and likely incomplete fishery records documented approximately 180,000 western pond turtles, a.k.a. "terrapin," collected throughout the state for sale in the San Francisco market (Bettelheim 2005). At the height of California's terrapin fisheries in 1899, some 107,869 lbs of terrapins (a low-end estimate of 53,935 two-pound terrapins) were harvested from San Joaquin, Solano,

Sonoma, Stanislaus, and Contra Costa counties alone (Wilcox 1902).

Such numbers are by no means representative of the fisheries' true scope. In California, the fishery had been underway at least as early as 1863, as noted by California Academy of Sciences curator of zoology James G. Cooper, who first documented the terrapin fisheries with the offhand remark: "...west of the Rocky Mountains, where but one species of the family is known to be common, the terrapin of our markets, (*Actinomys* [sic] *marmorata*, Agass) (Cooper 1863).

At the cessation of the fisheries in 1931, Tracy Irwin Storer, assistant professor of zoology at U.C. Davis, interviewed muskrat farmer Jerry Masek, who at the time was keeping 1,400 western pond turtles "in an icy cold aquatic pen holding them for market" (Storer 1931). That very same year, official records for the San Francisco terrapin market reported a mere 330 terrapins sold (State of California Fish and Game Commission 1932), suggesting the true nature of the fisheries might have been four to five times greater than officially acknowledged. Between 1863 and 1931, the historical record is riddled with inconsistencies and data gaps spanning as many as 12 years at a time (Bettelheim 2005).

Although very little information remains today regarding the details of California's terrapin fisheries, harvest data between 1922 and 1924 reported terrapins in both dozens and pounds (e.g. 1923: 47 dozen, 1,128 Lbs), giving an average weight per turtle of two pounds (State of California Fish and Game Commission 1923, 1924, 1927), a respectable size for an adult western pond turtle. Thus, it is likely – and to be expected – that trappers sought out adults, full-grown specimens that would yield more meat, for sale at market.

Such speculation is confirmed, in part, by observations recorded by Storer. In his account of a visit with trapper William "Bill" Ayers in 1923, Storer explained how Ayers would ship the largest turtles – measuring 10 inches (ca. 254 mm) – in December at $4 per dozen ($16 to $24 per sack), the medium-sized turtles in January, and the smallest – measuring 3 inches (ca. 76 mm) – in February at $3 per dozen (Storer 1923, Storer 1930).

Given that western pond turtles attain reproductive maturity at approximately 8 to 10 years of age and approximately 135 to 140 mm in length (Ernst *et al.* 1994), such selective culling probably discriminated against reproductively viable individuals and acted as an intense population suppressant. And even though the demand for western pond turtle all but disappeared during the post-1929 depression brought on by the New York stock market crash, the subsequent growth California has experienced between then and now – and the associated increase in urbanization and development, water projects, habitat fragmentation, disease, drought, competition with introduced non-native turtles, and the introduction of non-native predators such as the bullfrog and largemouth bass – has only further negatively affected western pond turtle populations.

Today, wild-caught western pond turtles typically measure approximately 130 to 170 mm (straight-line carapace length) (Holland 1994, Buskirk 2002) and weigh in the range of 0.6 to 1.88 lbs (282 to 854 g) (Congdon and Gibbons 1985, McKeown and Holland 1985). The largest California specimens reported within the last five years in the wild are males recorded in Marin County by herpetologist Pierre Fidenci measuring approximately 197 and 223 mm (Fidenci, personal communication 2004) and a specimen recorded from the Sacramento River by herpetologist Glen Lubcke measuring 241 mm (Lubcke, personal communication 2005), all exceptional rarities today.

According to several historical accounts, western pond turtles of this caliber were anything but rare during the extent of California's terrapin fishery. Cronise (1868) noted that those turtles "almost constantly for sale in the mar-

kets of San Francisco... grow eight or nine inches in length" (about 203 to 228 mm; the approximation due to the conversion inch-millimeter will not be repeated below). Strauch (1890) listed a western pond turtle specimen collected from the Sacramento River in 1876 as being 199 mm. A history of Kern County, California, described the largest turtles caught in Tulare Lake as "eight inches long and eight inches broad" (203 mm) (Wallace 1883). In 1887, the turtle was described as one that "grows to a very considerable size, the shell frequently measuring seven or eight inches" (178 to 203 mm) (True 1887). By 1895, Smith noted disparagingly that "their size is, however, small as compared with the diamond-back terrapin of the east coast, and examples over 5 inches in length are not common, although the species is said to attain a length of 8 inches" (127 mm; 203 mm) (Smith 1895).

In the 1920's, over a span of several years, Tracy Irwin Storer met with local turtle trappers and vendors and documented the turtle trade in its decline. In 1923, trapper Bill Ayers indicated to Storer that "the approximate size of the largest [is] about 10" long and 7"-8" broad" (Storer 1923), though Storer later reflected that despite Ayers' observations, "I have never seen one over 7 $^{1}/_{2}$ inches long" (190.5 mm) (Storer 1930).

During a 1925 visit to Sigmund Beck of S. Beck & Co., the only San Francisco turtle dealer known to exist by him by that time, Storer personally measured 50 turtles and found that those "turtles on hand are about 5 $^{1}/_{2}$ to 7 inches in length" (140 to 178 mm) (Storer 1925). And in 1929, trapper Sam Lamme "indicated that turtles up to 11" across (? in. lengthwise ?) [sic] of the carapace were taken at times" (279 mm) (Storer 1929).

These accounts are indeed telling, but a picture is worth a thousand words.

Although, to this author's knowledge, no photographs of western pond turtles taken prior to 1907 exist today that could be used to confirm their size, two herpetological illustrations of the western pond turtle by J.H. Richard do just that. Surprisingly, Richard's *Actinemys marmorata* (Fig. 1), published in Charles F. Girard's version of the "United States Exploring Expedition During the Years 1838, 1839, 1840, 1841, 1842," marks the earliest description and depiction of an adult western pond turtle's size (Girard 1858a, b). Official and unofficial versions of the *Herpetology* and *Atlas. Herpetology* volumes, published as part of the narrative of the United States Exploring Expedition (or "U.S. Ex. Ex." as it was known) were published in 1858. Since the minimum print run at that time was 250 copies, one hundred copies of the official version, published under Spencer F. Baird's name, were printed by C. Sherman & Son for governmental distribution, and an additional one hundred and fifty copies of the unofficial version, published under Girard's name, were printed from C. Sherman & Son's printed sheets by J.B. Lippincott & Co. for sale to the public (Leslie Overstreet, personal communication 2004).

Although the only sanctioned difference between the official and unofficial versions of the two editions were the title pages, Baird's official *Atlas. Herpetology* lacked the last nine of the 32 plates that appeared in Girard's unofficial version, called for nonetheless in both versions' list of plates (Baird 1858b, Girard 1858b). Amongst the plates withheld was plate 32, Richard's "*Actinemys marmorata*," which was described as follows:

> Fig. 1 represents the outline, half from above and half from below, of a female specimen of Actinemys marmorata.–p. 464. Fig. 2. is a similar view of the male sex. Figs. 3-15. exhibit a series of views, taken from young specimens, in order to show their relative proportions of length, width, and depth, as well as the granules and ridges of the carapax [sic]; and the sternum also, in order to give a correct idea of the general appearance of the species throughout the various stages of its growth: all of these figures being drawn the size of life (Baird 1858b).

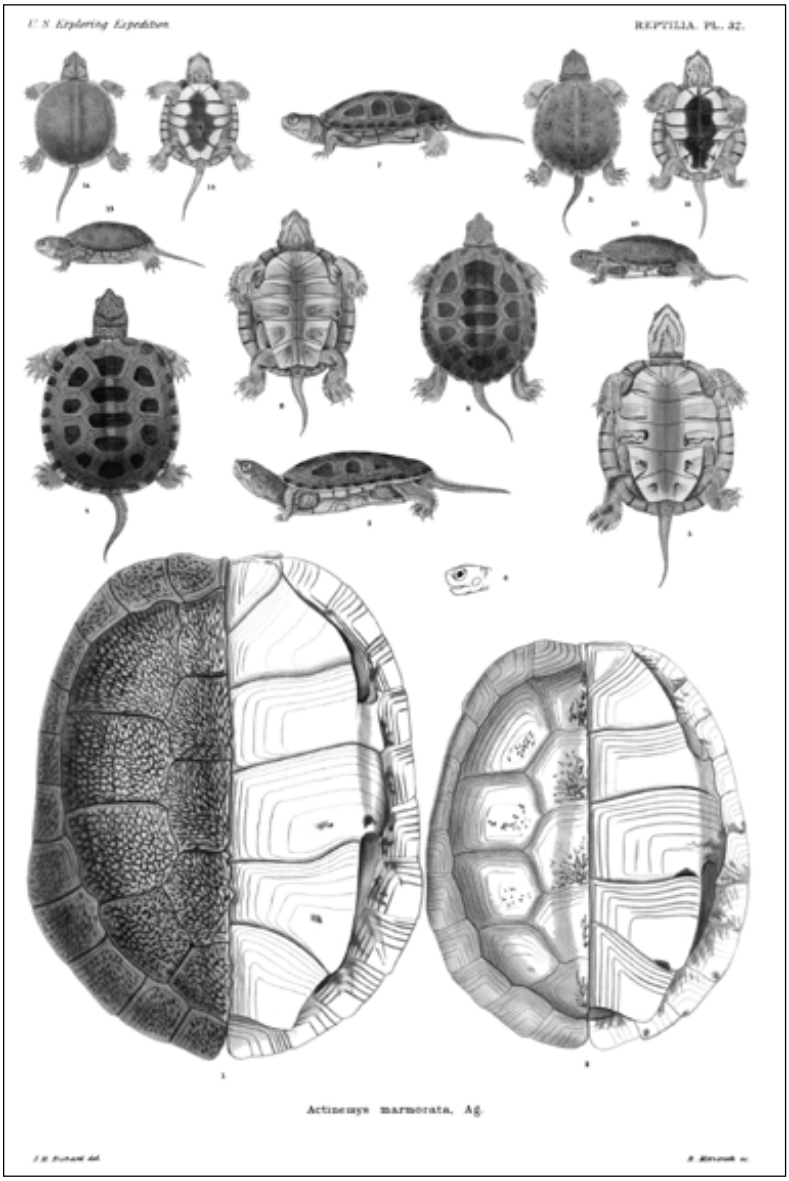

Fig. 1. *This collage of* Actinemys marmorata*, one of thirty-two plates published in the "*United States Exploring Expedition*..." reports, was drawn by J.H. Richard, much of whose work for the reports was in turn based on drawings by Joseph Drayton. Fig. 1 (bottom left) "represents the outline, half from above and half from below, of a female specimen." Fig. 2 (bottom right) "is a similar view of the male sex." Figs. 3-15 "exhibit a series of views, taken from young specimens, in color to show their relative proportions of length, width, and depth, as well as the granules and ridges of the carapax [sic]; and the sternum also, in order to give a correct idea of the general appearance of the species throughout the various stages of its growth: all of these figures being drawn the size of life." From Charles F. Girard, "United States Exploring Expedition During the Years 1838, 1839, 1840, 1841, 1842," Under the Command of Charles Wilkes, U.S.N., Atlas. Herpetology (Philadelphia: J.B. Lippincott & Co., 1858), plate XXXII. Courtesy California Academy of Sciences, Special Collections.*

Of those shells represented in plate 32, the largest, depicted in figure 1 from a specimen collected in the Sacramento River, California, measured approximately 180 mm straight-line carapace length based on measurements of the plate from the copies held by the Smithsonian Institute in Washington D.C. (182 mm), the Bancroft Library at U.C. Berkeley, California (179 mm), and the California Academy of Sciences in San Francisco, California (179 mm).

Richard's *Emys nigra* (Fig. 2), published a year later in Edward Hallowell's 1859 "Report Upon Reptiles of the Route" as part of Lieutenant R. S. Williamson's "Report of Explorations in California for Railroad Routes to Connect with the Routes near the 35th and 32nd Parallels of North Latitude," marks the second earliest depiction and description of size in adult western pond turtles. In-text, Hallowell describes his specimen to have a "length of carapax [sic], 6 1/2 inches, measured along curvature superiorly" (165 mm). Nevertheless, the plate was subsequently described in the "Explanation of the Plates" as being "Half natural size," suggesting that the specimen, based on a shell measurement of 99 mm, measured approximately 198 mm in length in life (Hallowell 1859).

A final, considerably rare herpetological plate depicting a female western pond turtle from several angles appeared as part of Alexander Strauch's 1862 studies of the turtle collection held at the Imperial Academy of Sciences at St. Petersburg (now the Russian Academy of Sciences). (This plate was reproduced on the cover of last issue's *Bibliotheca Herpetologica*, Vol. 5, No. 2: 2005.) A description of the turtle portrayed in 1862 later appeared in Strauch's 1890 re-evaluation of the Academy of Science's collection, whereby the turtle (formerly described by Strauch as *Clemmys Wosnessenskyi*) was described to be 178 mm in length (Bettelheim *et al.* 2005). The carapace lengths as they appear on the plate itself measure 110 mm in length (Wahlgren, personal communication 2005), suggesting the illustration was not drawn to "size of life."

Given the scarcity, frailty, or inaccessibility of some antiquarian herpetological works, photocopies or reprints can often be used in their stead when the original volumes cannot be examined. Take for example the 1978 Arno Press reprint of Girard's unofficial *Herpetology* and *Atlas. Herpetology*. The colored plates are "reproduced in black and white... [and] reduced from [their] original size" (Publisher's Note) with no reference to size. Still, the shell size of the larger adult can be ascertained with some basic mathematics.

Thinking back to the aforementioned monograph by Agassiz, Plates I-VI were described as "young turtles in their natural size at the time of hatching, or soon afterwards" (Agassiz 1857) where plate III, figures 5 through 8, depicts a hatchling western pond turtle (Fig. 3). Similarly, in the Girard *Atlas. Herpetology* plate 32, figures 3 through 15, "exhibit a series of views, taken from young specimens... all these figures are drawn the size of life" (Girard 1858a, 1978).

Assuming that the smallest "young specimen" from Girard's reprint is most likely the youngest of the hatchlings, we can set up a basic ratio to determine the size of the adult depicted therein (based on straight-line carapace lengths). Given that Agassiz's hatchling measures 32 mm, and that in Girard's reprint, the smallest of the hatchlings measures 19 mm and the adult shell (Fig. 1) measures 108 mm, we determine the actual size of the adult depicted in Girard reprint edition to 181.9 mm by applying the ratio of the measurements of the hatchlings in the two volumes.

Another example of the practical applications to be found in examining historical herpetological illustrations comes from the taxonomic melee surrounding the North American Pacific Coast's California legless lizard (*Anniella pulchra*) and Baja California legless lizard (*Anniella geronimensis*). In 1983, herpetologist Lawrence E. Hunt published a nomenclatural rearrangement of the genus *Anniella* in

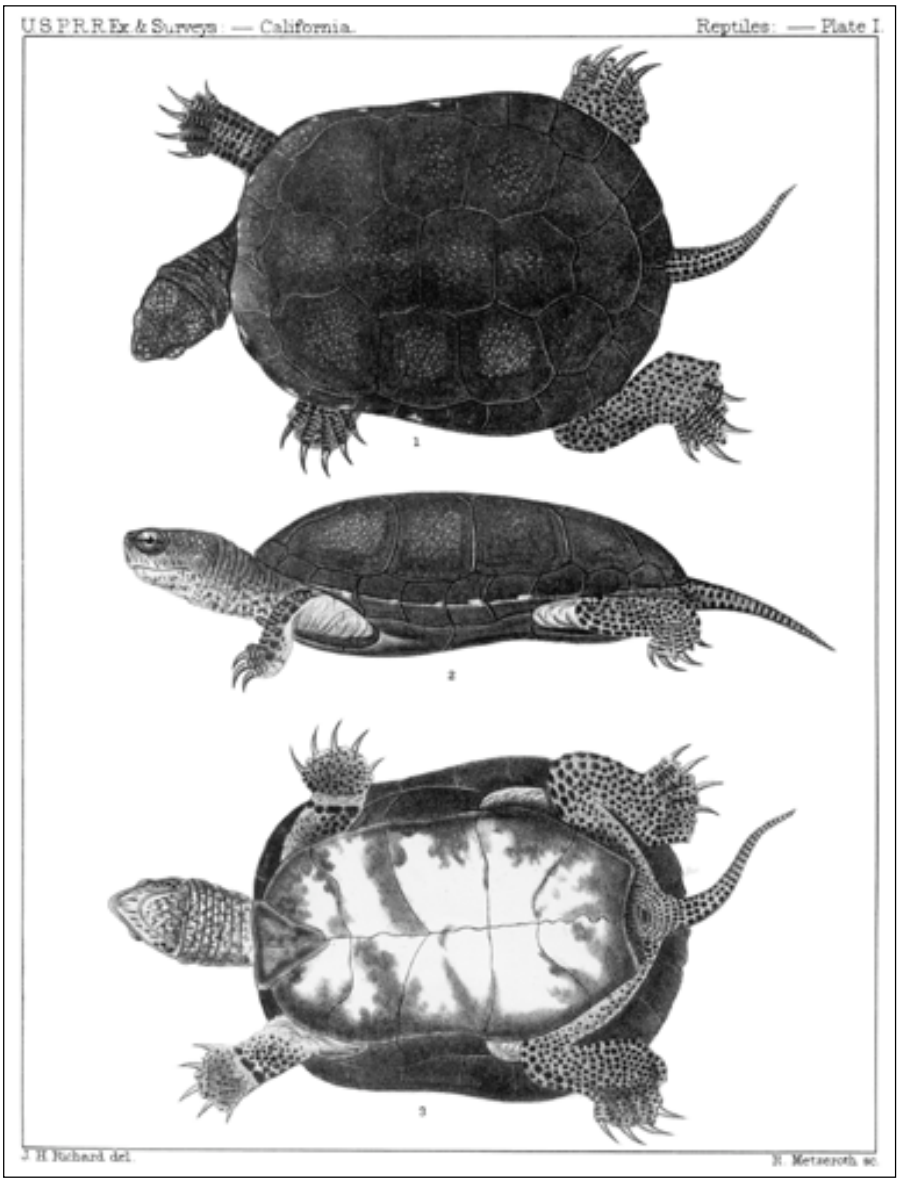

Fig. 2. *Edward Hallowell described the western pond turtle as* Emys nigra *based on a specimen collected in Kern County, California, at "Posa Creek." He described the turtle as follows: "Color blackish above, the upper part of head and neck presenting numerous very small yellow spots upon a black ground; anterior extremities with a tinge of yellow; under jaw and throat yellow, with dark colored markings; plastron yellow in the middle, with large blotches of black or dark brown at the sides, and anteriorly and posteriorly; under surface of tail and extremities blackish; tail of moderate length." From Edward Hallowell, "Report of Explorations in California for Railroad Routes to Connect with the Routes near the 35th and 32nd Parallels of North Latitude; Zoological Report, Report Upon Reptiles of the Route," vol. X, part IV, no. 1 (1859) plate 1 in* Reports of explorations and surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean*, Charles Wilkes (Washington: A. O. P. Nicholson, 1856-1860).*

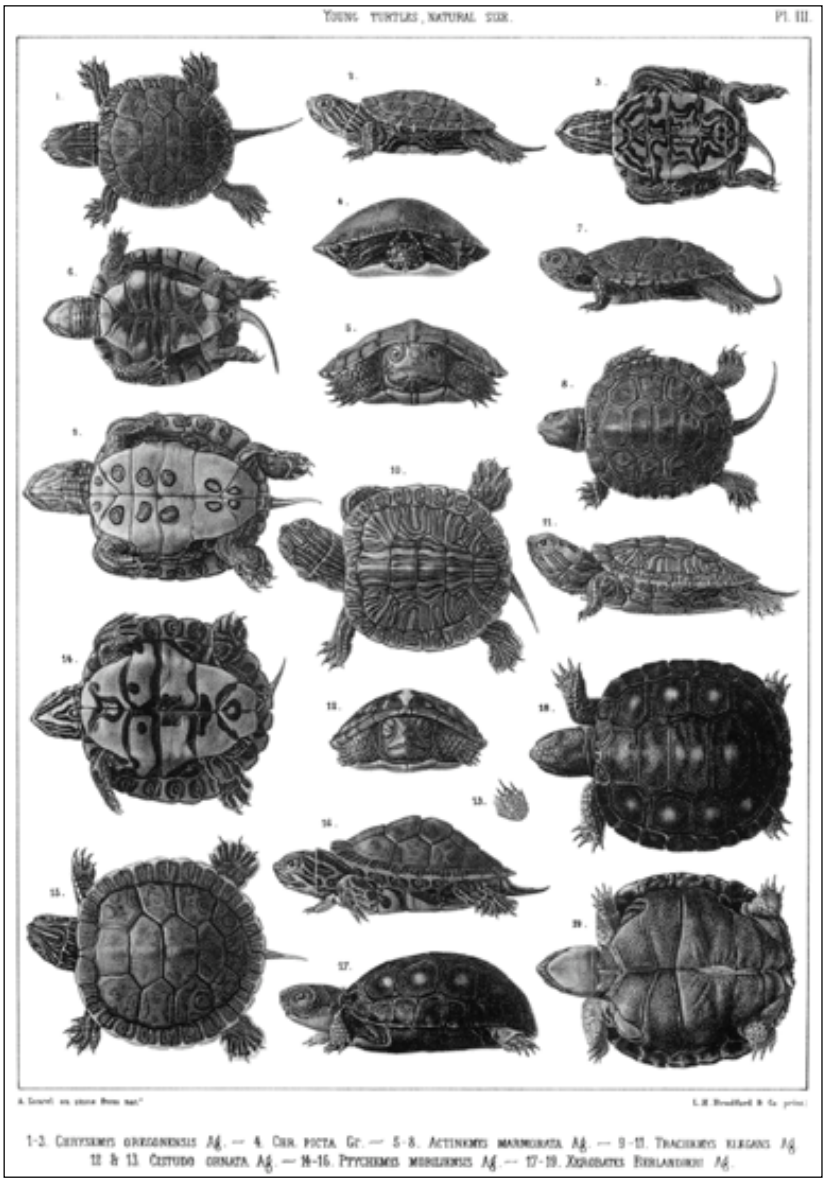

Fig. 3. *Included in Plate III "Young Turtles: Natural Size," taken from Louis Agassiz's "Contributions to the Natural History of the United States of America," is the western pond turtle (numbers 5-8), here identified as* Actinemys marmorata*. All of the plates were similarly intricately illustrated with life-size depictions of recently-hatched North American turtles, their eggs, and turtle embryology. From Louis Agassiz,* Contributions to the Natural History of the United States of America*, first monograph, vol. I & II, part III,* Embryology of the Turtle; with Thirty-four Plates *(Boston: Little, Brown & Co., 1857) plate III.*

the journal *Copeia* in which he uncovered the following historical blunder.

On October 2 and 22, 1846, surgeon John O. Goodridge of the H.M.S. Herald collected two specimens of *Anniella* from the coast of California (Upper and Lower California) (Hunt 1983). Upon the Herald's return to England in 1851, these lizards were then deposited in the Haslar Royal Naval Hospital collection with the other biological material collected, where curator Sir John Richardson presumably received and sorted the specimens (Hunt 1983).

On November 15, 1852, John Edward Gray described the *Anniella pulchra* holotype, but in doing so failed to designate a type specimen or provide dimensions (i.e. snout-to-vent length, tail length/total length) (Gray 1852, Hunt 1983), and three weeks later one of these *Anniella* specimens was deposited as part of "a small lot of reptiles" in the British Museum (Natural History), now the Natural History Museum. In 1854, Richardson published "The Zoology of the Voyage of the H.M.S. Herald..." wherein he described in detail "*Anniella pulchra* Gray," including five illustrative figures **(Fig. 4)** of the lizard (Richardson 1854, Hunt 1983).

Having personally examined the holotype specimen (BM 1946 8.29.32, original number BM 52.4.12.3), Hunt (1983) reported that the British Museum's holotype specimen of *Anniella pulchra* differed considerably from the "*Anniella pulchra* Gray" specimen described by Richardson (this specimen has since been lost; see Hunt 1983). In text, Richardson's specimen was described as having a snout-to-vent length of 114 mm and a tail length of 71 mm, and the accompanying figure 2 depicted the second supralabial scale as the largest; however, the holotype specimen as examined by Hunt measured 131 mm snout-to-vent with a tail length of 59 mm, and its fourth supralabial was the largest.

Given these discrepancies, Hunt hypothesized that the two specimens collected by Goodridge were actually two separate species, that Gray's *A. pulchra* holotype specimen examined by Hunt was in actuality that of the Baja California legless lizard (*A. geronimensis*), likely collected along the dunes of Bahia San Quintin, Baja California Norte, and that the specimen Richardson described in 1854 independent of the holotype was that of the California legless lizard (*A. pulchra*), presumably collected at Isla Los Coronados, Cabo Colnett, or the northeastern boundaries of Bahia San Quintin (Hunt 1983).

By comparing Gray's 1852 *de facto* holotype against Richardson's detailed 1854 description and illustrations of the two *Anniella* specimens, Hunt was able to unearth this century-old mishap in which "[the specimens] were subsequently confused by Richardson (and possibly by Gray), as belonging to a single species" (Hunt 1983). Hunt's hypothesis led to his proposed taxonomic revisions (Hunt 1983) which, though rejected by the herpetological community due to the possibility that such rearrangements might confuse and threaten nomenclatural stability, brought on the designation of a neotype by the International Commission of Zoological Nomenclature (ICZN) ten years later (ICZN 1993).

As illustrated in the cases described above, much can be gleaned today from the herpetological illustrations of yesterday. Be it an evaluation of historical and contemporary carapace lengths or elucidating a misstep in the scientific record, the measure of an illustration, both figuratively and literally, can prove invaluable to the modern scientist.

And while reprints are valuable as "photocopies" of volumes otherwise inaccessible due to scarcity or fragility, such modern texts can never replace the beauty, nor the value – both aesthetic and scientific – of antiquarian books and their illustrative plates. The union of text and illustration is still a sacred bond, more so when you consider the information that might already be lost.

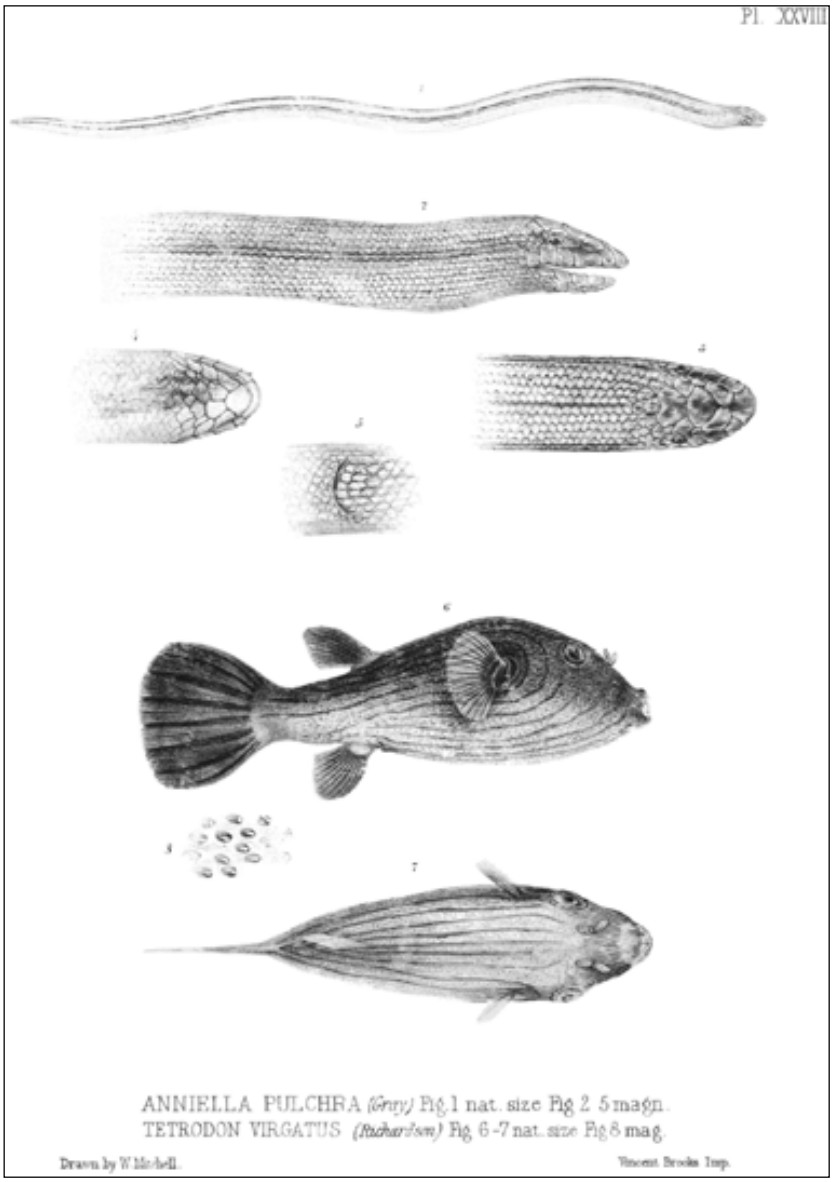
Pl. XXVIII
ANNIELLA PULCHRA (Gray) Fig. 1 nat. size Fig. 2. 5 magn.
TETRODON VIRGATUS (Richardson) Fig. 6-7 nat. size Fig. 8 mag.
Drawn by W. Mitchell.
Vincent Brooks Imp.

Fig. 4. *In 1852, John Edward Gray described the* Anniella pulchra *holotype based on one of two specimens collected by John O. Goodridge during his voyage aboard the H.M.S. Herald to, among other places, the coast of California. In doing so, Gray failed to designate a type specimen and the second of these* Anniella *specimens was later deposited in the British Natural History Museum. In 1854, Sir John Richardson published "The Zoology of the Voyage of the H.M.S. Herald..." wherein he described in detail "*Anniella pulchra *Gray," including the five illustrative figures pictured here. In comparing Gray's 1852* de facto *holotype against Richardson's detailed 1854 description and illustrations of the* Anniella *specimens, it was later determined that the two specimens were actually of two separate species, the Baja California legless lizard (*A. geronimensis*) and the California legless lizard (*A. pulchra*). From Sir John Richardson, "Vertebrals, Including Fossil Mammals," The Zoology of the Voyage of the H.M.S. Herald, Under the Command of Captain Henry Kellett, R.N., C.B., During the Years 1845-51 (London: Lovell Reeve, 1854) plate XXVIII. Courtesy The Bancroft Library.*

Acknowledgements

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References

Agassiz, Louis. 1857. Contributions to the Natural History of the United States of America. First Monograph: Volumes I & II, in three parts - Part I. Essay on Classification; Part II. North American Testudinata; Part III. Embryology of the Turtle; with Thirty-four Plates. Boston, Little, Brown & Co.

Baird, Spencer F. 1858a. United States Exploring Expedition During the Years 1838, 1839, 1840, 1841, 1842. Under the Command of Charles Wilkes, U.S.N. Vol. XX. Herpetology: with a Folio Atlas. C. Sherman & Son, Philadelphia.

Baird, Spencer F. 1858b. United States Exploring Expedition During the Years 1838, 1839, 1840, 1841, 1842. Under the Command of Charles Wilkes, U.S.N. Atlas. Herpetology. C. Sherman & Son, Philadelphia, Philadelphia.

Bettelheim, Matthew P. 2005. Marmorata: The Famed Mud Turtle of the San Francisco Market. California History. 82(4): 90-106.

Bettelheim, Matthew P., Dana E. Terry, and Julia Dunaeva. 2005. A Selective Translation of Alexander Strauch's "Chenological Studies," "Global Distribution," and "Comments" Specific to the Western Pond Turtle (*Clemmys marmorata*), Including a Bibliography of his Known Herpetological Works. Bibliotheca Herpetologica. 5(2): 10-27.

Buskirk, James R. 2002. The Western Pond Turtle, *Emys marmorata*. Radiata. 11(3): 3-30.

Congdon, Justin D. and J. Whitfield Gibbons. 1985. Egg Components and Reproductive Characteristics of Turtles: Relationships to Body Size. Herpetologica. 41(2): 194-205.

Cooper, James Graham. 1863. New California Animals. A Species New to Science. Proceedings of the California Academy of Natural Sciences. 2(1858-1862): 118-121.

Cronise, Titus Fey. 1868. The Natural Wealth of California. Comprising duly history, geography, topography, and scenery; climate; agriculture and commercial products; geology, zoology, and botany; mineralogy, mines, and mining processes; manufactures; steamship lines, railroads, and commerce; immigration, a detailed description of each county. H.H. Bancroft & Co., San Francisco.

Ernst, Carl H., Jeffrey E. Lovich, and Roger W. Barbour. 1994. Turtles of the United States and Canada. Smithsonian Institution: 234-239.

Girard, Charles F. 1858a. United States Exploring Expedition During the Years 1838, 1839, 1840, 1841, 1842. Under the Command of Charles Wilkes, U.S.N. Vol. XX. Herpetology: with a Folio Atlas. J.B. Lippincott & Co., Philadelphia.

Girard, Charles F. 1858b. United States Exploring Expedition During the Years 1838, 1839, 1840, 1841, 1842. Under the Command of Charles Wilkes, U.S.N. Atlas. Herpetology. J.B. Lippincott & Co., Philadelphia.

Girard, Charles F. 1978 (1858a, b). United States Exploring Expedition During the Years 1838, 1839, 1840, 1841, 1842. Under the Command of Charles Wilkes, U.S.N. Atlas - Herpetology. Arno Press, New York.

Gray, John E. 1852. Description of Several New Genera of Reptiles, Principally from the Collection of H.M.S. Herald. Annals and Magazine of Natural History 2(10): 437-440.

Hallowell, Edward. 1859. Report of Explorations in California for Railroad Routes to Connect with the Routes near the 35th and 32nd Parallels of North Latitude. Compiled by Lieutenant R. S. Williamson, Corps of Topographical Engineers. Zoological Report. (Report Upon Reptiles of the Route) Volume X, Part IV, No. 1.

Holland, Dan C. 1994. The Western Pond Turtle: Habitat and History. Final Report. Portland, OR: U.S. Department of Energy, Bonneville Power Administration.

Hunt, Lawrence E. 1983. A Nomenclatural Rearrangement of the Genus *Anniella* (Sauria: Anniellidae). Copeia (1): 79-89.

International Commission of Zoological Nomenclature. 1993. Opinion 1735. *Anniella pulchra* Gray, 1852 (Reptilia, Squamata): Neotype Designated. Bulletin of Zoological Nomenclature 50(2): 186-187.

McKeown, Sean and Dan C. Holland. 1985. *Clemmys marmorata* (Western Pond Turtle) Size. Herpetological Review. 16(2): 59.

Richardson, Sir John. 1854. Vertebrals, Including Fossil Mammals. pp. 154-155 in Forbes, Professor Edward (Ed.). The Zoology of the Voyage of the H.M.S. Herald, Under the Command of Captain Henry Kellett, R.N., C.B., During the Years 1845-51. Lovell Reeve, London. 171 pp., 32 pls.

Smith, H.M. 1895. Notes of a reconnaissance of the Fisheries of the Pacific Coast of the United States in 1884. Bulletin of the United States Fish Commission. 14: 223-288.

State of California Fish and Game Commission. 1923. Twenty-Seventh Biennial Report for the Years 1920-1922.

State of California Fish and Game Commission. 1924. Twenty-Eighth Biennial Report for the Years 1922-1924.

State of California Fish and Game Commission. 1927. Twenty-Ninth Biennial Report for the Years 1924-1926.

State of California Fish and Game Commission. 1932. Thirty-Second Biennial Report for the Years 1930-1932.

Storer, Tracy I. 1923. Field Notes 1920-1924, 16 March.

Storer, Tracy I. 1925. Field Notes 1925-1927, 16 October.

Storer, Tracy I. 1929. Field Notes 1928-1930, 20 March.

Storer, Tracy I. 1931. Field Notes 1931-1933, 10 December.

Storer, Tracy I. 1930. Notes on the Range and Life-History of the Pacific Fresh-Water Turtle, *Clemmys marmorata*. University of California Publications in Zoology. 32(5): 429-441.

Strauch, Alexander. 1862. Chelonologische Studien, mit Besonderer Beziehungauf die Schildkrötensammlung der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg. Mémoires de l'Académie Impériale des Sciences de St.-Pétersbourg, Série 7, 5(7): 1-196, pl 1.

Strauch, Alexander. 1890. Bemerkungen über die Schildkrötensammlung im Zoologischen Museum der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg. Mémoires de l'Académie Impériale des Sciences de St.-Pétersbourg, Série 7, 38(2): 1-128, pls 1-4.

True, Frederick W. 1884. Section I. Natural History of Useful Aquatic Animals, with an Atlas of Two Hundred and Seventy-seven Plates; Part II. Reptiles and Batrachians; Section F. - Tortoises, Turtles, and Terrapins; Chapter 43. The Pond Tortoises: 157-158. In: Goode, George Brown. 1884. The Fisheries and Fishery Industries of the United States. Washington: Government Printing Office.

Wallace W. Elliot and Co. 1883. History of Kern County, California, with Illustrations, Descriptive of its Scenery, Farms, Residences, Factories, Hotels, Business Houses, Schools, Churches, and Mines, from Original Drawings, with Biographical Sketches. Wallace W. Elliot and Co., San Francisco, CA.

Wilcox, William A. 1895. Appendix: Fisheries of the Pacific Coast. pp 139-304. In: United States Commission of Fish and Fisheries. 1895. Report of the Commissioner for the Year Ending June 30, 1893. Part XIX. Washington: Government Printing Office.

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A Syntype of *Lacerta serpens* Bloch, 1776 (Reptilia: Squamata: Scincidae): The Oldest Type Specimen in the Founding Collection of the Zoological Museum of Berlin

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The nucleus of herpetological collections of the Zoological Museum of Berlin (ZMB, now Institut für Systematische Zoologie, Museum für Naturkunde der Humboldt-Universität zu Berlin) was formed by specimens from the collection of Marcus Elieser Bloch (1723-1799) (Peters 1860; Brauer 1910). Bloch's personal natural history cabinet was most well-known for the fishes it contained (Paepke and Seegers 1986; Paepke 1999), but it included representative zoological specimens of many groups from around the world. By 1773 Bloch's cabinet was recognized as among the best in Europe (Karrer 1978) and in 1802, several years after his death, it was sold by Bloch's heirs to the Königlich Preußische Akademie der Wissenschaften zu Berlin for 4500 Reichstaler (Karrer 1978; Paepke 1999), approximately €140,000 in modern terms. The Akademie's collection was housed in the Königlichen Schloss zu Berlin along with the Royal Kunstkammer (Jahn 1985) but in 1810 the combined zoological collections were given to the newly founded Zoological Museum of the Friedrich-Wilhelm-Universität zu Berlin (Lichtenstein 1816).

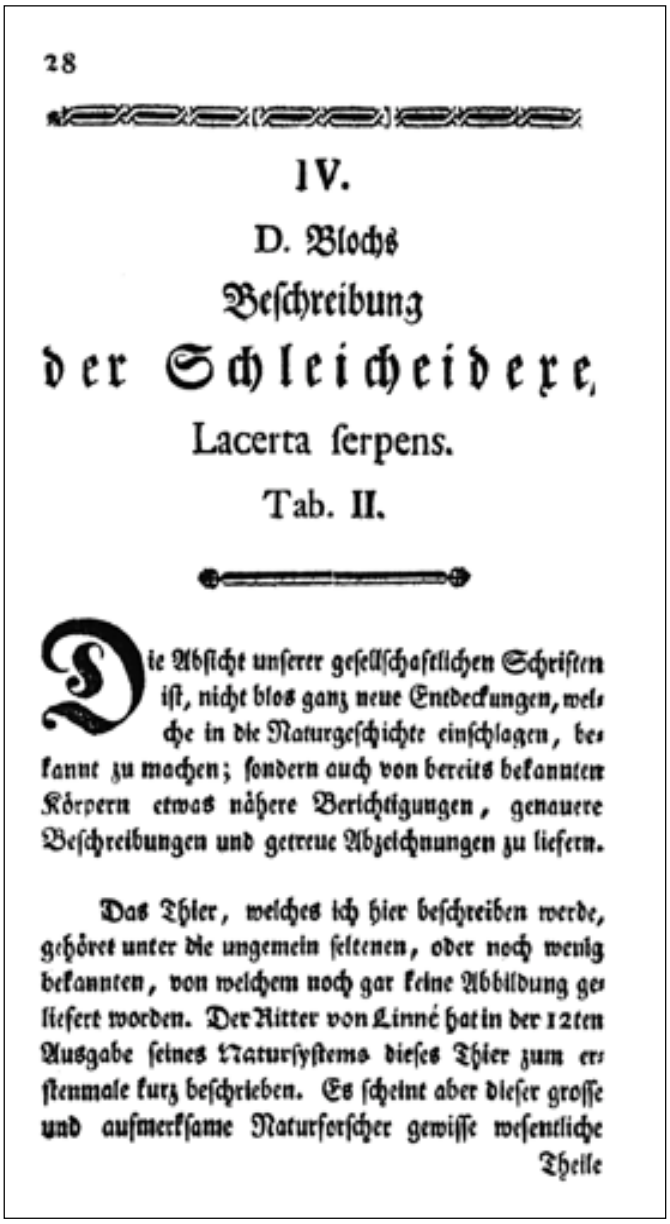
The curation of specimens and their associated data prior to the transfer to the Zoological Museum was less than ideal, and Peters (1865) suspected that some of Bloch's specimens, particularly the fish, but probably other components, may have been confused with others in the Akademie's collection. Although Bloch's catalogues of fishes, mollusks, birds and mammals are extant in the ZMB (Paepke 1999), his herpetological catalogue has not been located and the earliest written record listing Bloch's material is the "*Katalog Inventarium der Amphibien 1822/23*" compiled by Martin Carl Hinrich Lichtenstein, who served as the museum's director from 1813 to 1857. In this listing of material about 380 specimens of amphibian and reptiles derived from Bloch are cited (Bauer 1998), of which approximately 200 are still present in the ZMB collections today (Günther 2001). While some specimens may have been lost or destroyed in the intervening two centuries, many of those now missing were probably sold by Lichtenstein, who raised money for the museum by issuing a series of catalogues of duplicates (e.g., Lichtenstein 1818, 1823; Lichtenstein and Klug 1821; Lichtenstein and von Martens 1856), of which two (Lichtenstein 1823; Lichtenstein and von Martens 1856) included important selections of reptiles and amphibians.

As Bloch's own research interests were primarily ichthyological (Karrer 1978; Bauer 1998), his herpetological specimens are known to most herpetologists primarily through their description by Schneider (1799, 1801), who relied heavily on Bloch's material in preparing his *Historia Amphibiorum*, and a considerably later description by Wiegmann (1831). Bloch himself published only a few herpetological papers, including several short contributions on turtles (Bloch 1787, 1788; Bloch in Walbaum 1788) and a single descriptive paper in which a new reduced-limb skink, *Lacerta serpens* [syn. *Lygosoma quadrupes* (Linnaeus, 1766) fide Smith (1935)],

was proposed (Bloch 1776; **Fig. 1**). Bloch (1776) recognized that his new species had already been described by Linnaeus as *Anguis quadrupes*, but because the original description was brief, and because the lizard had erroneously been described as a snake, he felt that a new description was required. Much of Bloch's text is concerned with the description of Linnaeus and with speculation about the presumed aquatic habits of this small-legged lizard, but the following descriptive passage appears on pages 30 and 31 of the original article:

> Dieses Thier hat eine Wurmförmige Gestalt. Man bemerket weder am Kopfe, noch am Schwanz, einen Absatz. Vom Kopfe bis an die Hinterfüsse ist es zylindrisch. Der Körper ist über und über mit Schuppen besetzet, die, gleich den Dachziegeln, über einanderliegen. Der Ritter zählete an seinem Exemplare 14 bis 15 Striche, die am Rücken, der Länge nach, herunter laufen *) [Fußnote: *) *Striis 14.s.15, fuscis longitudinalibus, l.c.*]. An meinem habe ich 20 solcher Striche oder feiner Linien gezählet.
>
> Ich besitze zwey Stück von diesen Geschöpfen, und habe sie auf der beygefügten IIten Kupfertafel, nach ihrer natürlichen Grösse zeichnen lassen. Die grosse ist fünf und einen halben, die kleine vier und einen halben Zoll lang. Der Schwanz beträgt gerade die Hälfte der ganzen Länge, wird immer schmäler, und endiget sich in eine braungefärbte Spitze. Die grosse ist oben aschgrau, unten mit weissen, wie Silber glänzenden Schuppen, bedecket. Die braunen Flecke, welche der Mahler anzeiget, sind weiter nichts, als die von Schuppen entblössete Stellen, die das Thier durch einen Zufall verlohren hat. Die kleine ist oben von röthlich brauner, unten von grauer Farbe. Der Kopf ist klein und endiget sich in eine stumpfe Schnautze. Der Mund ist mit zwo Reihen kleiner Zähne besetzet, und hat eine braune Einfassung, die bis an die Augen reicht, welche davon eingeschlossen werden. Die Ohrgänge sind bey *Lit. a. a.* deutlich angezeiget. Die Füsse sind im Verhältniß des Thieres besonders klein und stehen weit auseinander. Der Zwischenraum beträgt zween und einen halben Zoll. Sie sitzen auch höher nach dem Rücken zu, als sie bey den übrigen dergleichen Thieren zu sitzen pflegen. Sie haben fünf Zeen, an jeder einen kleinen Nagel. Der Daumen und die kleine Zee, sind die kürzesten, die mittelste hingegen die längste. Die Vorderfüsse sitzen sehr nahe beym Kopfe, sind kaum zwo Linien lang, und nicht viel stärker, als ein guter Zwirnsfaden. Es lassen sich daran weder Beugungen, noch Gelenke wahrnehmen. Die Hintefüsse sind etwas stärker, und in der Mitte mit einem Gelenke versehen. Die Zeen und Nägel sind so klein, daß man sie mit blossen Augen kaum unterscheiden kann. Zwischen den Hinterfüssen befindet sich eine Spalte, die von einem Fuße bis zum andern gehet. (S. Fig. I.b.b.) In deren Mitte nimmt man eine Vertiefung wahr.
>
> [This animal has a wormlike appearance. One notices no break between head and body and between tail and body, an analogy. From the head to the hind feet it is cylindrical. The body is covered all over by scales which, like roofing tiles, lie one above the other. The Knight [Linnaeus] counted 14 to 15 longitudinal lines running down the back in his specimens [footnote: *) *Striis 14.s.15, fuscis longitudinalibus, l.c.*]. In mine I counted 20 such stripes or fine lines.
>
> I possess two specimens of this lizard, and have had them figured at actual size on the accompanying copper plate II. The large one is five and one half and the smaller four and a half Zoll [1 Prussian Zoll = 2.615 cm] in length. The tail amounts to approximately half of the whole length, tapers posteriorly, and terminates in a brown-colored point. The larger specimen is ash gray above, and is covered ventrally with white scales shining like silver. The brown marks, which the painter indicates, are nothing more than places that are bare of scales, which the animal had lost by coincidence. The smaller specimen is reddish brown above, and the venter is of a grey color. The head is small and terminates in a blunt snout. The mouth bears two rows of small teeth, and has a brown margin which extends to the eyes, which are framed by this brown color. The ear canals are clearly evident, *Lit. a. a.*. The feet are particularly small in proportion to the animal and are far apart from each other. The gap between the pairs of legs amounts to two and a half Zoll. They also are positioned higher

toward the back than is usually the case in other comparable animals. They have five toes, each with a small nail. The thumb and the small toe are the shortest, the middle toes are the longest. The front limbs are positioned very close to the head, are hardly two lines [1 Prussian Line = 2.174 mm] long, and not much more robust than a good thick thread. In them neither bends nor joints can be discerned. The hind limbs are somewhat more robust, and are provided with joints in the middle of their length. The toes and nails are so small that one can hardly differentiate them with the naked eye. Between the hind limbs is a crevice, which goes from one foot to the other (see Fig. 1. b. b.) and which has a deepening in the center.] (translation by authors)



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IV.

D. Blochs

Beſchreibung

der Schleicheidexe,

Lacerta ſerpens.

Tab. II.

Die Abſicht unſerer geſellſchaftlichen Schriften iſt, nicht blos ganz neue Entdeckungen, welche in die Naturgeſchichte einſchlagen, bekannt zu machen; ſondern auch von bereits bekannten Körpern etwas nähere Berichtigungen, genauere Beſchreibungen und getreue Abzeichnungen zu liefern.

Das Thier, welches ich hier beſchreiben werde, gehöret unter die ungemein ſeltenen, oder noch wenig bekannten, von welchem noch gar keine Abbildung geliefert worden. Der Ritter von Linné hat in der 12ten Ausgabe ſeines Naturſyſtems dieſes Thier zum erſtenmale kurz beſchrieben. Es ſcheint aber dieſer groſſe und aufmerkſame Naturforſcher gewiſſe weſentliche Theile

Fig. 1. *Title page of Bloch's 1776 description of* Lacerta serpens.

Clearly Bloch's description of *L. serpens* was based on two specimens, both of which he illustrated (Bloch 1776; Fig. 2). Schneider (1801) subsequently referred to "Geminum exemplum Blochianum," suggesting that he examined both of these. However, records for only one specimen appear in the 1822/23 catalogue (Fig. 3) and a later catalogue, *Amphibia Musei Regii Berolinensis (1830)* (Fig. 4). It is possible that the second specimen was lost or destroyed prior to the receipt of Bloch's collection by the Museum, or that it was traded or sold very early in Lichtenstein's tenure as director of the museum (although the presence of only a single specimen prior to Lichtenstein's 1823 sale catalogue suggests that this is not the case).

Bauer (1998) and Bauer et al. (2003) reported that the ZMB syntype of *Lacerta serpens* was missing from the ZMB collections. In 2004, however, the specimen (ZMB 1276) was located. Comparison of the specimen with Bloch's illustrations (**Fig. 2**) reveal it to be the larger of his two examples. Lichtenstein's writing on the jar label, as well as the earlier catalogues, give the locality of the specimen as "Java", but the current ZMB catalogue has the locality changed

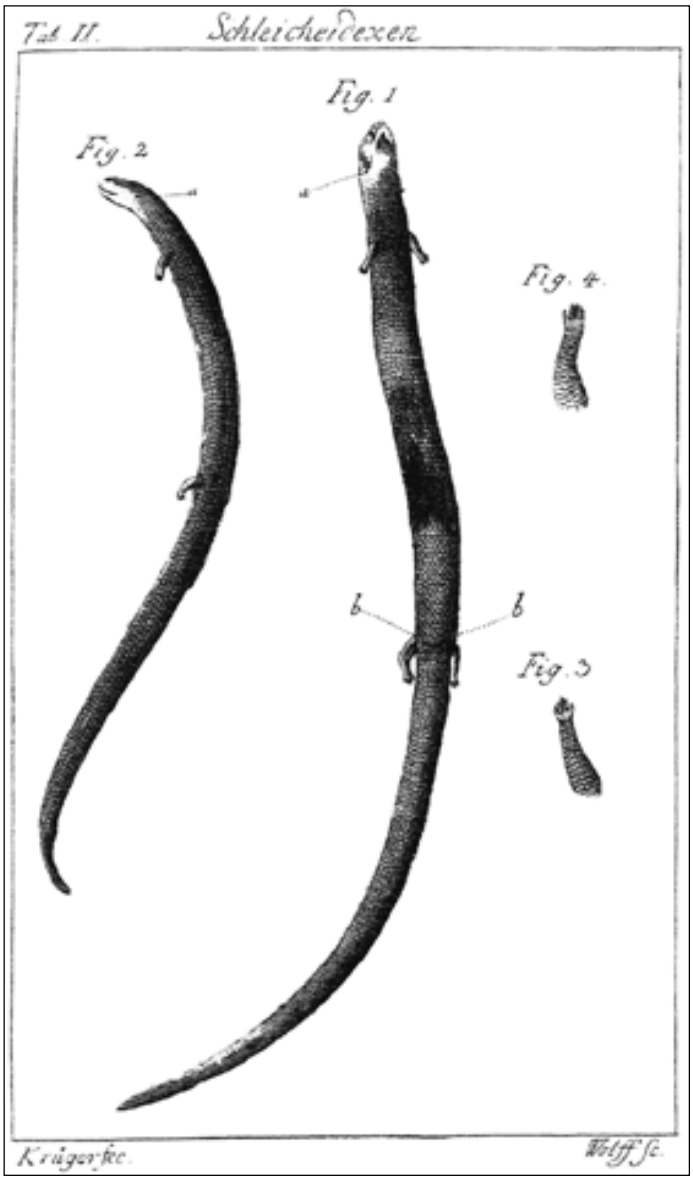

Fig. 2. *Plate from Bloch (1776) showing the two syntypes of* Lacerta serpens. *The larger specimen (at right) is the surviving ZMB syntype.*

to the more general "Ost-Indien" (**Fig. 5**). Bloch's (1776) description does not provide a locality for the types, but does mention that a friend reported to him that lizards of this species could be found swimming in a bay in Batavia (Jakarta) [!], which may account for the references to Java. Little is known of the provenance of most of Bloch's material. Existing ZMB records, beginning with the *Katalog Inventarium*, typically list general localities, such as "Ost-Indien" or "Südamerika," and many entries have no locality. Likewise, Schneider's (1799, 1801) descriptions of Bloch's Asian specimens almost all have published type localities of "India orientalis." Schneider collected his data while Bloch was still alive, and the two men were close friends, so it may be assumed that Schneider would have had access to Bloch's own (now lost) catalogue, so it seems likely that Bloch himself was usually ignorant of the exact origin of the material he purchased or received.

The jar containing the syntype of *Lacerta serpens* is sealed using a method not otherwise employed in the ZMB herpetological collection. The vast majority of jars in the collection are sealed with ground glass stoppers, typically with a slightly convex surface or with a raised rectangular central ridge. This jar has a flat top that is covered by a membrane that is secured by a thin cord. This appears to be a modification of a jar sealing technique that was widely employed in museums from the late 17th century until the early 20th century (Carter and Walker 1999). The membrane is probably pig (or sheep) bladder that has been varnished. We did not disturb the bladder, but a variety of materials have been used to seal such jars before the application of the outer bladder including Stockholm tar and red lead (sesquioxide), gum arabic, one or more layers lead and/or tin foil, and thin glass plates

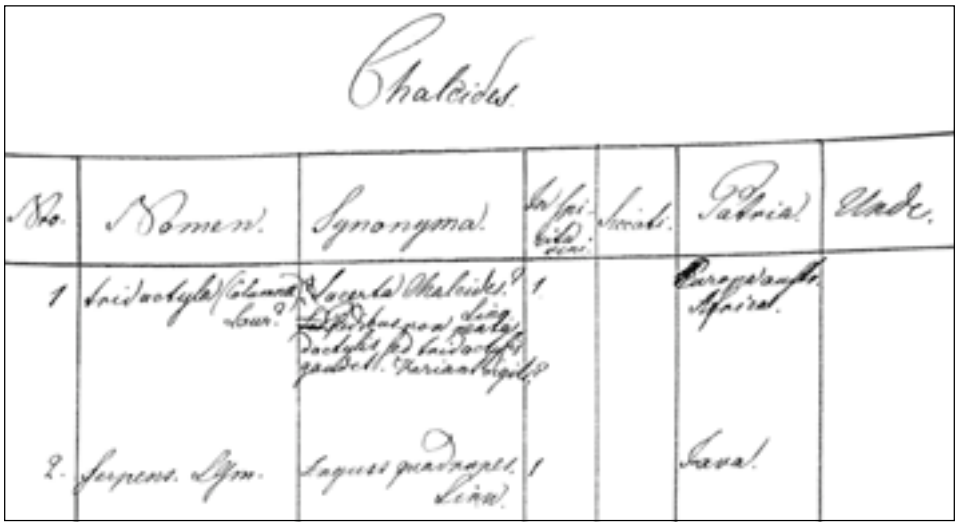

Fig. 3. *Catalogue entry for* Lacerta serpens *(as* Chalcides*) from the* Katalog Inventarium der Amphibien 1822/23*, the oldest surviving catalogue of the ZMB herpetological collection.*

(Pole 1790; Harris 1979; Carter and Walker 1999), and in some cases the bladder itself was covered with wax (Thomas 1892; Clark 1993). Two methods described by Pole (1790), at a time contemporaneous with Bloch, used either a glass plate affixed by means of glazier's putty, or a combination of tin foil and additional bladders beneath the final exterior bladder, which was itself "drawn down tight … and carefully bound down by as many regular turns of packthread as will extend from the rim to the bulge of the glass; this second bladder should smoothly cover the bulge of the glass, and be confined in the situation by a cord, binding it below until it is dry, when the edges may be cut smooth" — exactly as seen in the jar containing the syntype of *Lacerta serpens* (**Fig. 6**). Jars sealed using a glass plate with red lead sealant are more common in the ichthyological collections of the ZMB, and many of Bloch's fish types are stored in such containers (Paepke 1999), although whether this represents Bloch's own preservation technique remains uncertain. Regardless, the use of this unique (for the herpetological collection) method of jar sealing, similar to that employed in the even older

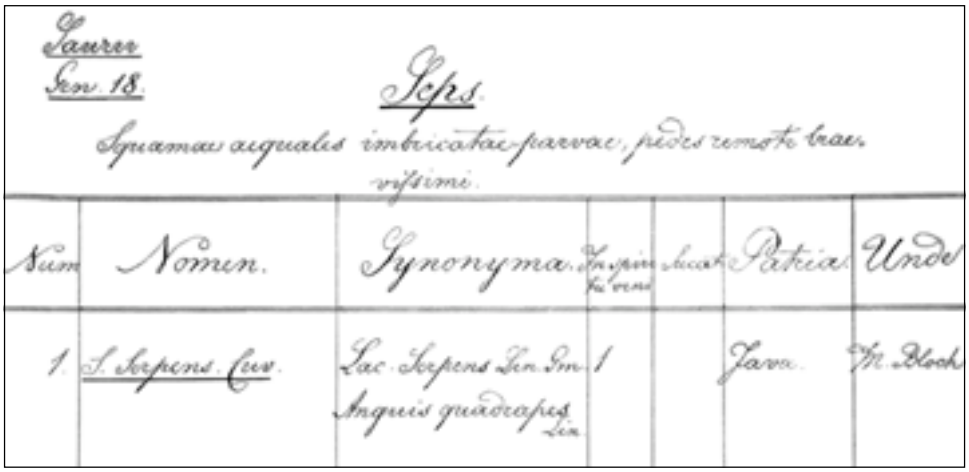

Fig. 4. *Catalogue entry for* Lacerta serpens *(as* Seps*) from* Amphibia Musei Regii Berolinensis (1830)*. Note the incorrect attribution of the name to Cuvier.*

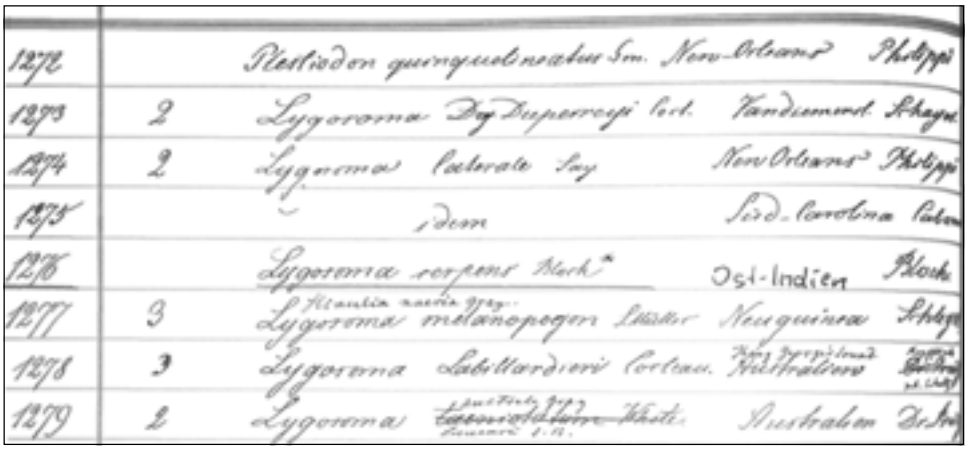
1272
Rectiodon quinquelineatus Sm. New-Orleans Philippi
1273 2 Lygosoma Dey Duperreyi Gir. Vandiemend Schayer
1274 2 Lygosoma Coloratum Say New Orleans Philippi
1275 Idem Süd-Carolina Cobra
1276 Lygosoma serpens Bloch Ost-Indien Bloch
1277 3 Lygosoma melanopogon Neuguinea Schleg
1278 3 Lygosoma Labillardieri Gerlau. Neuholland
1279 2 Lygosoma Australien

Fig. 5. *Catalogue entry for the syntype of* Lacerta serpens *(as* Lygosoma*) in the current ZMB catalogue, which was begun in the last years of Lichtenstein's directorship in the mid 1850s. The locality "Ost-Indien" was added by a later hand.*

collections of Seba (see Seba 1734, frontispiece) and Linck (see Seifert 19, fig. p. 36) suggests that the jar is one of the oldest in the collection, perhaps predating the specimen's accession into the museum.

The exact dates of accession of material into Bloch's collection are unknown. However many of Bloch's tropical Asian specimens were collected or supplied by Christoph Samuel John (1747-1813) who was a Danish missionary serving in Tranquebar (the modern Tarangambadi, Tamil Nadu) India from 1771 until his death (Paepke 1999). In addition, at least some of Bloch's material from the Indonesian region, such as *L. serpens*, may have been obtained through Dutch natural history dealers (Paepke 1999). Clearly, whatever the specimen's source, it was obtained prior to 1776, and probably no earlier than 1765, the first year in which Bloch's financial situation would have likely allowed him to invest in his natural history cabinet (Paepke 1999).

Only two other components of the ZMB herpetological collection are this old. A small number of specimens of comparable age derive from the collection of Peter Simon Pallas (1741-1811) made during his explorations of the Russian empire (1768-1774). Pallas brought a portion of his Russian fish and herpetological collections to Berlin when he returned to Germany in 1810. Upon his death these were given by Pallas to his friend, the anatomist Karl Asmund Rudolphi (1771-1832) (Stresemann 1957; Wendland 1991). Some of these entered the ZMB collections prior to the 1822/23 catalogue, but others were only presented to the museum at the time of Rudolphi's death in 1832 (*ZMB Eingangs Journal 1811-1857*). Some of these specimens cannot now be located and some specimens associated with the catalogue numbers assigned to the Pallas specimens are not conspecific with the taxa they purport to represent, suggesting accidental loss or transfer of specimens over time (Szczerbak 1974; Bauer and Günther 1995). Among those Pallas specimens that are accounted for are both gekkonid and agamid types (Bauer and Günther 1991; Denzer et al. 1997). Many of Pallas's types, however, were not formally published until well after the author's death, due to the delay in publication of the *Zoographia Rosso-Asiatica* (Stresemann 1951; Svetovidov 1976). Only one of Pallas' taxa represented by types in the ZMB collection, *Lacerta helioscopus* Pallas, 1771 [now *Phrynocephalus helioscopus*] was actually described prior to Bloch's *Lacerta serpens*. However, this specimen does not appear in the *Katalog Inventarium*, suggesting that it was among those that entered the collection in 1832.

Oldest by far are portions of the collection amassed by Albertus Seba (1665–1736). Seba's second collection was auctioned in 1752 (Anonymous 1752) and parts were purchased by a Dr. Janssen

from Düsseldorf via a broker and eventually resold to Graf von Borcke (or Borck) zu Hueth (first name and dates of birth and death unknown) of Schlesien (=Silesia) who presented the collection to the museum in Berlin shortly after its founding (Boeseman 1970; Juriev 1981). According to ZMB archives von Borcke donated 280 jars of amphibians and reptiles in wine spirits to the museum, where they arrived on 18 December 1818 (pers. comm. Hannelore Landsberg, January 2005). There are more than one hundred amphibian and reptile specimens from von Borcke still extant in the ZMB and, along with Bloch's material, they constitute the majority of the specimens listed in the *Katalog Inventarium 1822/ 1823.* However, none of these specimens has any indication as having originally been part of the Seba collection. It is likely that some of Seba material is indeed present, but identifying it, and establishing if any of the specimens are Linnean or later types will take careful comparison with Seba's (1734, 1735) illustrations.

Although some or all of the specimens of Pallas and all of those (as yet unidentified) of Seba (via Graf von Borcke) were collected prior to the syntype of *Lacerta serpens*, these specimens did not enter the ZMB collection until later (1811-1832 in the case of the Pallas material and 18 December 1818 in the case of the probable Seba material). Thus, at the founding of the museum, the only herpetological types it contained were those from Bloch's collection, including many designated by Schneider (1799, 1801) and the syntype of *L. serpens,* described 25 years earlier by Bloch himself. The rediscovery of *Lacerta serpens* is not particularly significant in a taxonomic context, but as the first described type of the foundation collection of the museum's vast herpetological holdings and as a relic of early preservation technique, it is of historical and museological importance.

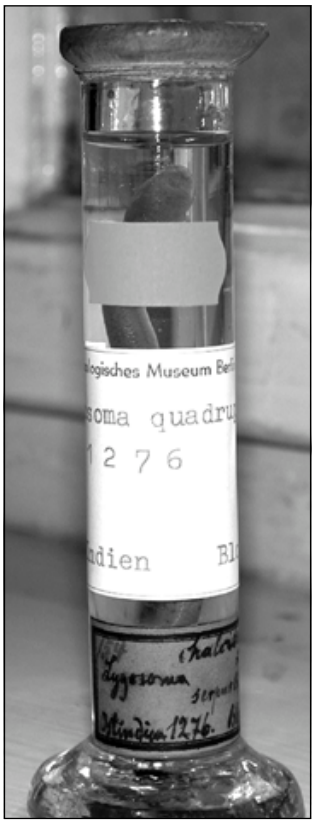

Fig. 6. *Jar containing the syntype (ZMB 1276) of* Lacerta serpens. *The jar is sealed using a method popular during Bloch's life and not otherwise seen in the ZMB herpetological collection. The lower (yellowish-brown) label dates from Lichtenstein's period of directorship.*

Acknowledgements

We thank John Simmons (University of Kansas) and Simon Moore (Hampshire City Council) for their expert advice on older museum jar sealing techniques and for their recommendations of associated literature. We also thank Hannelore Landsberg (ZMB Archives) for assistance with information about the donation of Graf von Borcke. The manuscript was improved by the suggestions of two anonymous reviewers.

References

Anonymous. 1752. Catalogus van de uitmuntende cabinetten met allerley soorten van ongemeene schoone gepolyste hoorns, dubletschelpen, coraal-en zeegewassen; beneveus het zeldzame en vermaarde cabinet van gediertens in flessen en naturalia, en veele raare anatomische preparata van den Professor Ruysch: als mede een verzameling van diverse mineralen versteende zaaken, agaate boomsteenen, edele gesteentens, en verscheide andere rariteiten. Met veel moeiteen kosten in een reekd van jaaren vergadert. En nagelaten door wijlen der Heere Albertus Seba, Lid van de Keizerlijke Leopoldische Carolinische en Koningl. Englische Societeit der Wetenschappen, als ook der Academie van Bolonien. Amsterdam, The Netherlands: Th. Sluyzer, J. Schut en N. Blinkvliet, 1-51, 1-38, 1-18, 1-22.

Bauer, A.M. 1998. South Asian herpetological specimens of historical note in the Zoological Museum, Berlin. Hamadryad 23:133–149.

Bauer, A.M. and Günther, R. 1991. An annotated type catalogue of the geckos (Reptilia: Gekkonidae) in the Zoological Museum, Berlin. Mitteilungen aus dem Zoologischen Museum in Berlin 67:279–310.

Bauer, A.M. and Günther, R. 1995. An annotated type catalogue of the lacertids (Reptilia: Lacertidae) in the Zoological Museum, Berlin. Mitteilungen aus dem Zoologischen Museum in Berlin. 71:37–62.

Bauer, A.M., Shea, G.M., and Günther, R. 2003. An annotated catalogue of the types of scincid lizards (Reptilia: Squamata: Scincidae) in the collection of the Museum für Naturkunde der Humboldt-Universität zu Berlin (ZMB). Mitteilungen aus dem Museum für Naturkunde in Berlin, Zoologische Reihe 79:253–321.

Bloch, M.E. 1776. Beschreibung der Schleicheidexe, *Lacerta serpens*. Beschäftigungen der Berlinischen Gesellschaft naturforschender Freunde 2:28–34, pl. II.

Bloch, M.E. 1787. Nachricht von der Dosenschildkröte. Schriften der Gesellschaft naturforschender Freunde zu Berlin 7:131–134 + 1 pl.

Bloch, M.E. 1788. Nachricht von der Dosenschildkröte. Schriften der Gesellschaft naturforschender Freunde zu Berlin 8:16.

Boeseman, M. 1970. The vicissitudes and dispersal of Albertus Seba's zoological specimens. Zoolologische Mededelingen, Leiden 44:177–206, 4 pls.

Brauer, A. 1910. Das zoologische Museum. Pp. 372–389 in Lenz, M., Geschichte der Königlichen Friedrich-Wilhelms-Universität zu Berlin. Bd. III. Wissenschaftliche Anstalten, Spruchkollegium, Statistik. Halle an der Saale, Germany: Buchhandlung des Waisenhauses.

Carter, D. and Walker, A.K. 1999. Care and Conservation of Natural History Collections. Oxford, UK: Butterworth Heinemann, xxii + 226 pp.

Clark, P.F. 1993. Museum storage containers: back to the future. Pp. 347–359 in F. Palacios, C. Martínez and B. Thomas (eds), Comunicaciones sobre la Situación, Preservación y Conservación de Colescciones de Historia Natural. Volumen 2. Congreso Mundial sobre Preservación y Conservación de Colescciones de Historia Natural, Madrid, 1992. Madrid, Spain: Dirección General de Bellas Artes y Archivos, Minestero de Cultura, xi + 426 pp.

Denzer, W., Günther, R. and Manthey, U. 1997. Kommentierter Typenkatalog der Agamen (Reptilia: Squamata: Agamidae) des Museums für Naturkunde der Humboldt-Universität zu Berlin (ehemals Zoologisches Museum Berlin). Mitteilungen aus dem Zoologischen Museum in Berlin 73:309–332.

Günther, R. 2001. Zur Geschichte der herpetologischen Sammlung des Museums für Naturkunde Berlin. Pp. 359-374 in Rieck, W., Hallmann, G. and Bischoff, W. (eds.), Die Geschichte der Herpetologie und Terrarienkunde im deutschsprachigen Raum. Mertensiella 12.

Harris, R.H. 1979. The conservation of one of the earliest known examples of a fluid-preserved injection dissection. Museums Journal 79:71–72.

Jahn, I. 1985. Zur Vertretung der Zoologie und zur Entwicklung ihrer institutionellen Grundlagen an der Berliner Universität von ihrer Gründung bis 1920. Wissenschaftliche Zeitschrift der Humboldt-Universität zu Berlin, Mathematisch-Naturwissenschaftliche Reihe 34:260–280.

Juriev, K.P. 1981. Albert Seba and his contribution to the development of herpetology [in Russian]. Pp. 109–120 in Ananjeva, N.B. and Borkin, L.J. (eds.), Proceedings of the Zoological Institute of the Academy of Sciences of the USSR 101.

Karrer, C. 1978. Marcus Elieser Bloch (1723-1799) sein Leben und die Geschichte seiner Fischsammlung. Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin (N.F.) 18:129–149.

Karrer, C., Whitehead, P.J.P., and Paepke, H.-J. 1994. Bloch & Schneider's Systema Ichthyologiae, 1801: history and authorship of fish names. Mitteilungen aus dem Zoologischen Museum in Berlin 70:99–111.

Lichtenstein, M.C.H. 1816. Das Zoologische Museum der Universität zu Berlin. Berlin, Germany, Ferdinand Dümmler. 108 pp., 1 plan.

Lichtenstein, M.H.C. 1818. Verzeichniß von ausgestopften Säugthieren und Vögeln, welche am 12ten October 1818 u. folg. Tage im zoologischen Museum der königl. Universität zu Berlin dem Meistbietenden öffentlich verkauft werden sollen. Isis von Oken 1818:column 1105 + 5 unnumbered pp.

Lichtenstein, M.H.C. 1823. Verzeichniss der Doubletten des zoologischen Museums der Königl. Universität zu Berlin nebst Beschreibung vieler bisher unbekannter Arten von Säugethieren, Vögeln, Amphibien und Fischen. Berlin, Germany: T. Trautwein. x + 118pp.

Lichtenstein, M.H.C. and Klug, F. 1821. Zweites Preisverzeichniß der Doubletten des zoologischen Museums der. königl. Universität zu Berlin. Beylage zu Isis von Oken 1821(1):1–14.

Lichtenstein, (M.) H. (C.) and von Martens, E. C. 1856. Nomenclator reptilium et amphibiorum

Musei Zoologici Berolinensis. Namenverzeichniss der in der zoologischen Sammlung der Königlichen Universität zu Berlin aufgestellten Arten von Reptilien und Amphibien nach ihren Ordnungen, Familien und Gattungen. Berlin, Germany: Akademie der Wissenschaften, iv + 45 pp.

Linnaeus, C. 1766. Systema naturæ per regna tria naturæ, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Edito duoecima, reformata. Tomus I, Pars I. Holmiæ [Stockholm]: Laurenti Salvi, 532 pp.

Paepke, H.-J. 1999. Bloch's Fish Collection in the Museum für Naturkunde der Humboldt Universität zu Berlin, an Illustrated Catalog and Historical Account. Ruggell, Liechtenstein: A. R. Gantner Verlag KG, 216 pp. + 32 pls.

Paepke, H.-J. and L. Seegers. 1986. Kritischer Katalog der Typen und Typoide der Fischsammlung des Zoologischen Museums Berlin. Teil 1: Atheriniformes. Mitteilungen aus dem Zoologischen Museum in Berlin 62:135–186.

Peters, W.C.H. 1860. Das zoologische Museum. Pp. 274–278 in Köpke, R., Die Gründung der Königlichen Friedrich-Wilhelms-Universität zu Berlin. Berlin, Germany: Gustav Schade.

Peters, W.C.H. 1865. Über einige Bloch'sche Arten der Fisch-Gattung *Serranus*. Monatsberichte der Königlich Akademie der Wissenschaften zu Berlin 1865:97–111.

Pole, T. 1790. The Anatomical Instructor; or, an Illustration of the Modern and Most Approved Methods of Preparing the Different Parts of the Human Body, and of Quadrupeds, by Injection, Corrosion, Maceration, Distention, Articulation, Modelling, etc. London, UK: Crouchman and Fry, lxxx + [16] + 304 + [12] pp., 10 leaves pls.

Schneider, J.G. 1799. Historiae Amphibiorum Naturalis et Literariae. Fasciculus Primus continens Ranas, Calamitas, Bufones, Salamandras et Hydros in Genera et Species Descriptos Notisque suis Distinctos. Jena, Germany: F. Frommann. xiv + 264 + [2] pp., 2 pls.

Schneider, J.G. 1801. Historiae Amphibiorum Naturalis et Literariae. Fasciculus Secundus continens Crocodilos, Scincos, Chamaesauras, Boas, Pseudoboas, Elapes, Angues, Amphisbaenas et Caecilias. Jena, Germany: F. Frommann. vi + 364 pp., 2 pls.

Seba, A. 1734. Locupletissimi Rerum Naturalium Thesauri Accurata Descriptio, et Iconibus Artificiosissimis Expressio, per Universam Physices Historiam. Opus, cui, in hoc Rerum Genere, Nullum par Exstitit. Ex toto Terrarum Orbe Collegit, Digessit, Descripsit, et Depingendum Curavit Albertus Seba, Etzela Oostfrisius, Academiæ Caesareæ Leopoldino Carolinæ Naturæ Curiosorum Collega Xenocrates dictus; Societatis Regiæ Anglicanæ, et Instituti Bononiensis, Sodalis. Tomus I. Amstelaedami [Amsterdam], The Netherlands: Janssonio-Waesbergios, & J. Wetstenium, & Gul. Smith,. [33], 1–178, 111 pls.

Seba, A. 1735. Locupletissimi Rerum Naturalium Thesauri Accurata Descriptio, et Iconibus Artificiosissimis Expressio, per Universam Physices Historiam. Opus, cui, in hoc Rerum Genere, Nullum par Exstitit. Ex toto Terrarum Orbe Collegit, Digessit, Descripsit, et Depingendum Curavit Albertus Seba, Etzela Oostfrisius, Academiæ Caesareæ Leopoldino Carolinæ Naturæ Curiosorum Collega Xenocrates dictus; Societatis Regiæ Anglicanæ, et Instituti Bononiensis, Sodalis. Tomus II. Amstelaedami [Amsterdam], The Netherlands: Janssonio-Waesbergios, & J. Wetstenium, & Gul. Smith, [34], 1–154, 114 pls.

Seifert, A. no date [1935 or 1937]. Die Apotheker-Familie Linck in Leipzig und ihr Naturalien- und Kunstkabinett (1670-1840). Mittenwald, Germany: Gesellschaft für Geschichte der Pharmazie. 76 pp.

Smith, M.A. 1935. The Fauna of British India, including Ceylon and Burma. Reptilia and Amphibia. Vol. II – Sauria. London, UK: Taylor and Francis. xiii + 440 pp., 1 pl., 2 maps.

Stresemann, E. 1951. Date of publication of Pallas's 'Zoogeographia Rosso-Asiatica.' The Ibis 93:316–318.

Stresemann, E. 1957. Pallas' letzte Tage. Beiträge zur Vogelkunde 5:207–209.

Svetovidov, A.N. 1976. On the dates of publication of P. S. Pallas' "Zoographia Rosso-Asiatica" [in Russian]. Zoologicheskii Zhurnal 55:596–599.

Szczerbak, N.N. 1974. Palearktic *Eremias* [in Russian]. Kiev, USSR [now Ukraine]: Naukova Dumka, 296 pp.

Thomas, O. 1892. On the probable identity of certain specimens in the Lidth de Jeude Collection, and now in the British Museum, with those figured by Albertus Seba in his 'Thesaurus' of 1734. Proceedings of the Zoological Society of London 1892:309–317.

Wallbaum, J.J. 1788. Auszug eines Briefes des Herrn Dr. Wallbaum, an den Herrn Dr. Bloch, die Dosenschildkröte betreffend. Schriften der Gesellschaft naturforschender Freunde zu Berlin 8:292–295.

Wendland, F. 1992. Peter Simon Pallas (1741-1811). Berlin, Germany: Walter de Gruyter, 2 vols. xviii + 1176 pp.

Wiegmann, A. 1831. Zur Amphibienkunde. Isis von Oken 24:columns 291-299.

Book Review

Islands And The Sea: Essays On Herpetological Exploration In The West Indies.

Robert W. Henderson and Robert Powell (Eds.). 2003.
Society for the Study of Amphibians and Reptiles,
Ithaca, New York. ISBN 0-916984-62-1.
viii + 304 p. US $48.00 (cloth)

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In their introduction to this entertaining and informative volume, editors Robert Henderson and Robert Powell set forth their objectives in bringing together this collection essays, and they pay homage to two individuals whose names are closely associated with herpetological research in the West Indies: the late Drs. Ernest E. Williams and Albert Schwartz. Neither Williams nor Schwartz, it seems, left any explicit written record of their impressions of the West Indian experience. This, the editors resolve, shall not happen for contemporary herpetologists working in the islands. With publication of *Islands and the Sea*, Henderson and Powell have produced an extraordinary book that records and preserves the experiences, impressions, and reminiscences of field herpetologists working in the West Indies.

The twenty-eight essays that constitute this volume were authored by thirty contributors who have varying degrees of experience in the West Indies. Some have dedicated their professional lives to studying the herpetofauna of the West Indies. Others report as little as three weeks experience in the islands. The essayists include individuals who were born and raised in the islands, as well as those from Europe and the United States. Their essays include personal anecdotes and testimonials, ranging from brief narratives to more lengthy autobiographical sketches. In the aggregate the expertise of the contributors spans three generations of herpetological interest and endeavor, from the youthful enthusiasm of graduate students (e.g., Richard Glor), to the reminiscences of senior researchers such as Henry Fitch, who made his first visit to the West Indies (Hispaniola) in 1985 at the age of 75!

Following the introduction is a section that briefly traces the development of herpetological knowledge in the West Indies. Included are extensive excerpts from the writings of 19th century naturalists Phillip Gosse (Jamaica), and Frederick Ober (Lesser Antilles), and from those of G. Kingsley Noble (Dominican Republic) and Thomas Barbour (Dominican Republic, Cuba), herpetologists who worked in the West Indies in the early and middle parts of the 20th century. The section concludes with several long passages from Archie F. Carr's *The Windward Road.* These earlier accounts of the West Indian experience provide a backdrop against which the essays can be compared, and an historical context within which they can be interpreted.

The essays are arranged geographically, roughly along a northwest-southeast axis, beginning with the Bahamas (3 essays), through the Greater Antilles (Cuba –7 essays; Jamaica –3 essays; Hispaniola –7 essays; Puerto Rico –1 essay), and the Lesser Antilles (7 essays). With the exception of Trinidad, the continental islands of northern South America are not explicitly treated. The essays are variable in their organi-

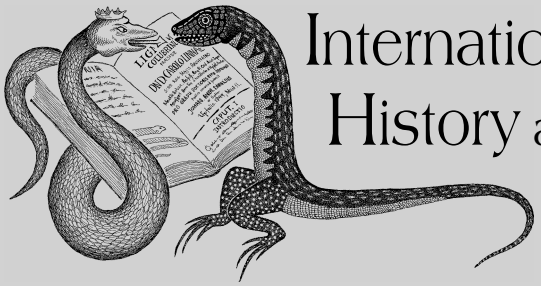
zation, but each concludes with a list of suggested readings that provides an introduction to relevant literature. Supplementing the text are 316 black-and-white illustrations, including a spectacular frontispiece photo, taken in 1888, of a snake hunter from St. Lucia with a *Bothrops caribbaeus* draped over a pole. The book concludes with three indices, one to "places," one to "people," and one to "animals."

Who among us has not imagined that because we write papers, monographs, and the occasional technical book, there lies within us the soul of a creative writer yearning for the opportunity to give written expression? The editors have allowed the contributors wide latitude to indulge that impulse, to give free reign to their creative side, which is on conspicuous display in many of the essays. The results are decidedly variable, ranging from the eloquent, evocative, and deeply moving, to something less than that. Yet each account is, in its way, entertaining and informative.

Some contributors recount herpetological reconnaissances to remote areas (Richard Franz, Blair Hedges), others detail the search for rare or otherwise poorly known species (Richard Glor). Some report the results of long-term ecological studies (Ellen Censky), whereas others emphasize conservation of threatened or endangered species (Ken Dodd, Charles Knapp). Several of the accounts are not exclusively herpetological, but are nonetheless fascinating, as, for example, the search for the Ivory-billed Woodpecker in eastern Cuba (Alberto Estrada), or for *Solinodon* on Hispaniola (Stanley Rand). Regional pride is apparent in many of the contributions, including Rafael Joglar's impassioned justification for the appellation "*La Isla del Encanto*" to his native Puerto Rico.

Taken as a whole, these essays provide a vivid picture of herpetological research in the West Indies over the past half century, based on first-hand accounts of those who have actually done the work. There is a compelling immediacy in these narratives, for the authors write on topics about which they are deeply knowledgeable and about which they care passionately. The essays also provide fascinating insights into the nature of the people who study amphibians and reptiles under difficult, even dangerous, field conditions. In telling their stories, the authors reveal much about themselves. Skip Lazell's skepticism concerning cladistic dogma and the island biogeographic generalizations of MacArthur and Wilson are clearly in evidence. Henry Fitch confides that if he had it to do over again, he might have chosen to conduct his field studies in the Dominican Republic rather than in Costa Rica. George Gorman confesses that he "... lacks the gene necessary for working efficiently in a laboratory." Meg Stewart expresses melancholy at the environmental deterioration that has occurred in Jamaica during the 30 years subsequent to her work there. Poignantly, and almost as an aside, Cuban biologist Alberto Estrada speaks of his political exile from his native country.

I commend the editors – *Los dos Robertos* – for making this important volume of essays a reality. Field biologists will require little encouragement to buy this book, but it deserves a broader readership. I recommend it to anyone with an interest in the natural history of the West Indies, or with a curiosity about the nature of the people who study amphibians and reptiles there.



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